PATENT SPECIFICATION 721,684

Date of filing Complete Specification : Sept. 22, 1953.

Application Date : Nov. 28, 1952. No. 30179/52.

Complete Specification Published : Jan. 12, 1955.

Index at Acceptance :—Classes 38(1), E7E1 ; and 38(5), S3(B : C : F).

COMPLETE SPECIFICATION.

Improvements relating to Switch and Fuse Units for Electric Installations.

We, GEORGE H. SCHOLES & COMPANY LIMITED, a British Company, of Wylex Works, Wythenshawe, Manchester, FREDERICK JAMES PEARCE and GEOFFREY STEPHEN PEARCE, both British Subjects, and both of the Company's address, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement :—

This invention relates to a main switch and fuse unit for electric installations also comprising a meter, the fuse unit comprising fuse elements for the various electrical appliances such as fires, refrigerators, cookers and the like supplied through the meter. Usually the initial installation comprises a box containing the main switch and the requisite fuse elements and if an extension of the installation is required in order to serve additional appliances or apparatus, further switch-and-fuse units in separate boxes are added and additional connections are made to the meter and the main switch.

In some cases the initial installation is provided with more fuse elements than are required in order to anticipate possible additional appliances but this method is rendered obsolete by the present improvement.

The object of the present invention is to provide in a simple and economical manner for the supply of additional electrical appliances through fuses without the necessity of adding further switch-fuse units and of making additional connections to the meter and to the main switch and without having additional fuses in the original installation merely to anticipate possible additional requirements.

In accordance with our present invention, we incorporate a terminal connector including wire clamping means in a bus-bar fuse terminal of the switch and fuse unit, which constitutes the original installation, so that when an additional fuse unit is required and placed in position, an extension wire can be connected between such terminal connector incorporated in the bus-bar fuse terminal of the switch and fuse unit and a terminal connector in a similar bus-bar fuse terminal in the additional unit. the neutral wiring being between a block in the additional unit leading to a neutral block in the switch-and-fuse unit and so to the switch. In like manner if a still further fuse unit is required for a further additional electrical appliance, an extension wire can be connected to a terminal connector on a bus-bar terminal of the further additional unit from the terminal connector of the end bus-bar terminal of the additional unit.

It will be seen therefore that the original switch and fuse unit can be readily looped to an additional fuse unit or units, without any extension of the bus-bar and without making additional connections to the supply meter, merely by connecting up the terminal connectors of the bus-bar terminals of the units in series.

The accompanying explanatory drawing shows a switch and fuse unit connected up to an additional fuse unit in accordance with this invention.

In the switch-and-fuse unit in the case *a*, the detachable fuse members (not shown) are held between blade springs *b* and blocks *c* which on the outgoing side have terminal connectors comprising holes with clamping screws *d* for the outgoing cables. The bus-bar is shown at *e*.

In carrying out our invention, each of the blocks *c* of the bus-bar fuse terminals as shown, or at least the block *c* of the outer

end bus-bar fuse terminal is made into a terminal connector with a hole therein to receive a cable, and clamping screws *g* to secure the cable therein. With this arrangement when an additional fuse unit is required for additional electric appliances, a cable *h* is taken from the outer end bus-bar fuse terminal to the additional fuse unit in the case *i*, which on the bus-bar side has terminal connectors incorporated with the bus-bar fuse units. If there are more than two bus-bar fuse terminals in the additional fuse unit, the end bus-bar fuse terminals alone may have terminal connectors incorporated therein.

The neutral wiring in between blocks *j* (with wire or cable clamps therein) in each unit leading to a neutral block *k* in the original unit and so to the switch *m*, the blocks being connected up in series.

The wiring from unit to unit and to the external appliances is carried through holes formed by removing parts as *n* known as "knock-outs" in the boxes containing the units.

What we claim is:—

1. A main switch and fuse unit for an electric installation, having a terminal connector including wire clamping means incorporated in a bus-bar fuse terminal so that when an additional fuse unit is required for additional electric appliances, an extension wire can be connected between such terminal connector incorporated in the bus-bar fuse terminal of the switch and fuse unit and a similar terminal connector in a bus-bar fuse terminal in the additional unit, the neutral wiring being between a block in the additional unit leading to a neutral block in the switch and fuse unit and so to the switch.

2. A main switch and fuse unit as claimed in Claim 1 with an additional fuse unit electrically connected thereto, in which a further additional unit is electrically interconnected with the additional unit by terminal connectors incorporated in the bus-bar fuse terminals of the additional and further additional units, the neutral wiring being in series between blocks in the several units and leading to the switch.

3. A main switch and fuse unit interconnected with an additional fuse unit so that the one switch controls the current passing through all the fuse units, substantially as described and as illustrated in the accompanying drawing.

MARKS & CLERK.

PROVISIONAL SPECIFICATION.

Improvements relating to Switch and Fuse Units for Electric Installations.

We, GEORGE H. SCHOLES & COMPANY LIMITED, a British Company, of Wylex Works, Wythenshawe, Manchester, FREDERICK JAMES PEARCE and GEOFFREY STEPHEN PEARCE, both British Subjects, and both of the Company's address, do hereby declare this invention to be described in the following statement:—

This invention relates to electric installations comprising a meter, a main switch and fuses for the various electrical units such as fires, refrigerators, cookers and the like supplied through the meter. Usually the initial installation comprises a box containing the switch and the requisite fuse elements and if an extension of the installation is required in order to serve additional appliances or apparatus, further switch and fuse units in separate boxes are added and additional cable connections are made to the meter and the main switch.

The object of the present invention is to provide in a simple and economical manner for the supply of additional electrical appliances through fuses without the necessity of adding further switch-fuse units and of making additional connections to the meter and to the main switch.

In accordance with our present invention, we provide a hole through the outer end bus-bar fuse terminal of the switch and fuse unit, which constitutes the original installation, and provide clamping screws on the top of said terminal, so that when an additional fuse unit is required and placed in position, an extension wire can be connected between such terminal and a solid bus-bar fuse terminal in the additional unit. In like manner if a still further fuse unit is required for an additional electrical appliance, an extension wire can be connected to the end bus-bar terminal of the further additional unit from the end bus-bar terminal of the additional unit.

It will be seen therefore that the original switch and fuse unit can be readily looped to an additional unit or units, without any extension of the bus-bar and without making additional connections to the supply meter, merely by connecting up the bus-bar terminals of the units in series.

The neutral or return wiring is between

blocks (with wire or cable clamps therein) in each unit leading to a neutral block in the original unit and so to the switch, the blocks being connected up in series.

The wiring from unit to unit is carried through holes in the boxes containing the units.

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Abingdon : Printed for Her Majesty's Stationery Office, by Burgess & Son (Abingdon), Ltd.—1954.
Published at The Patent Office, 25, Southampton Buildings, London, W.C.2,
from which copies may be obtained.

721,684 COMPLETE SPECIFICATION

1 SHEET

This drawing is a reproduction of the Original on a reduced scale.